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ABSTRACT

This booklet, designed to help the consumer prepare for the change to the metric system, discusses the following related topics: simplicity and universality of the metric system, weather, shopping, textiles, cooking, and driving. (MP)

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

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moving to metric

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foreword

America is going metric. This booklet will help you, as a consumer, prepare for the changes that lie ahead.

The metric system is really very simple. Everything is based on tens, and multiplying or dividing by 10 is easy.

The change to metric is part of a world-wide trend the United States has wisely chosen to join. More than 99 percent of the world's population lives in countries which have officially adopted the metric system. The U. S. Metric Conversion Act was signed into law as of December 23, 1975. It established a 17-member Metric Board to coordinate our voluntary conversion to the metric system.

Every sector of the economy is changing over to the metric system and you—as an individual—will soon notice the change. Most of the major changes will be in manufacturing and industry, but as consumers, you and your family will gradually see changes in measurements of length, volume, mass (weight), and temperature.

This booklet was adapted from a similar publication produced by the Canadian Metric Commission and printed with their permission.

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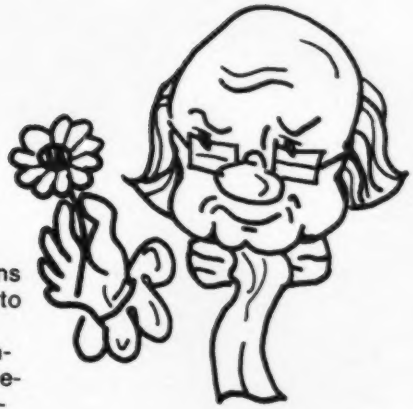
1975

simplicity



- There are only 7 base units in the International System of Metric Measurement compared to more than 50 in the inch-pound system.
- In the metric system, larger and smaller units are obtained by combining the appropriate prefix with a base unit.
- Multiples and submultiples of metric units are related by powers of 10, just like our system of money: $.01, $.10, $1.00, $10.00, etc.
- The simplicity of the system will make calculations easier. Decimals are easier to work with than fractions.
- It will simplify the teaching of measurement in mathematics by delaying the introduction of fractions, and requiring fewer units of measurement to learn.

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universality

you use weights & measures.....

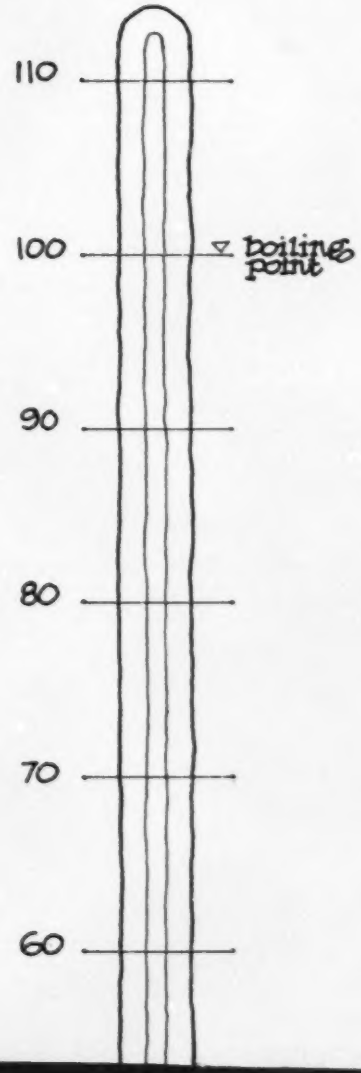
You use a variety of measures every day of your life. You shop, work, cook, and relax using a familiar measurement system, but are already making more frequent use of the metric system than you probably realize. Many things are already measured in metric units such as drug prescriptions, motorcycle cylinder capacities, photographic film, competition in the Olympic games, and some brands of cigarettes.

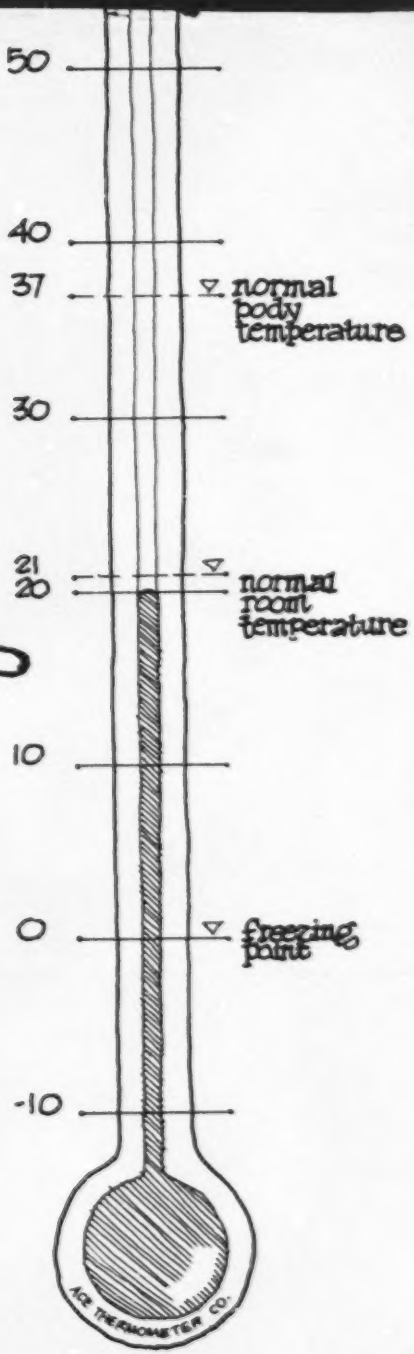
The conversion of pharmaceuticals began many years ago and is now nearing completion. Most hospitals have completed conversion on an internal basis.

While shopping, you may have noticed that most products are labeled in both metric and customary units. For example, the 7-Up Bottling Company has begun to package its product in litre bottles. Incidentally, most people couldn't tell the difference in size between a litre and a quart container.

weather

Temperature forecasts will be given in degrees Celsius. Rainfall will be reported in millimetres and snowfall in centimetres. Incidentally, Anders Celsius, a Swedish astronomer, developed this scale in the early 1700's. It used to be called the centigrade scale.




50
40
37
normal body temperature
30
21
20
normal room temperature
10
0
freezing point
-10
ACE THERMOMETER CO.

Our old friend, Ben Franklin,
will escort us through this
introduction to the metric system.

why metric ?

The United States is converting to the metric system because it's a simpler, more universally used system.

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More than 99 percent of the world's population lives in metric countries. All the major industrialized nations have either already converted or are in the process of changing over to the metric system.

Since all these nations were either metric or committed to going metric, it was only a matter of time before the United States decided to convert in order to keep from damaging our position in international trade.

but let's get back to you.

what is.... *thinking* metric ?

The key to learning a new language is thinking in that language, instead of translating from the familiar to the new language. In the same way, the key to learning the metric system is thinking metric and avoiding, wherever possible, converting measurement from metric to inch-pound units.

How? By associating specific metric measurement with a visual experience or activity. For example, a metre is the length of a long step or a little more than the height of a doorknob. A nickel has a mass of about five grams, a dollar bill has a mass of about one gram. A kilogram of steak is a good serving for four adults.

For most of us, there are only four important units to remember: for length, it is the metre; for volume, the litre (rhymes with metre); for mass (weight), the gram; and for temperature, degree Celsius. Except for temperature, these units combine with a few prefixes to give us the measurements most of us will encounter.

shopping

Once you have learned the new units, metric conversion will make shopping easier. The many units now used to measure prepackaged, canned, and frozen foods will, in most cases, be replaced by fewer and simpler units. The resulting calculations will make price comparisons and unit pricing easier.

The package sizes of many food items may be altered slightly in order to package in rounded metric quantities.

For food items sold by number, such as certain fruits or vegetables, the method of purchase will not change. Food items presently sold by weight, such as meat, will be sold by the kilogram. Liquid items will be sold in litres and multiples or parts of litres.

When you need to buy paint or carpet, you will use the square metre. This unit will describe paint coverage and carpet size as well as the floor space in houses, apartments, stores, offices, and classrooms. A common size area rug might be 3 metres by 4 metres or 12 square metres.

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textiles

Textiles will be dual-labeled for a time and then they will be labeled in centimetre widths and sold in metre lengths. These changes will not take place overnight. Fabric widths will be altered slightly to express rounded metric quantities, but because the tolerance in fabric widths is so great, the change will probably go unnoticed.

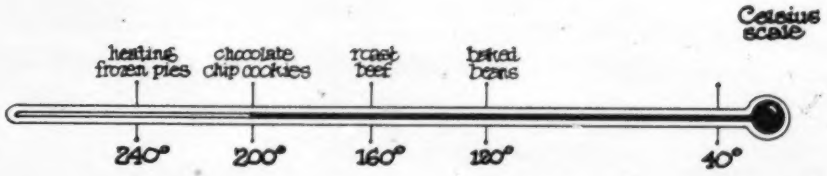
Buying clothes will be easy. Articles of clothing such as belts, which are measured in inches, will probably be dual-labeled in inches and centimetres for a period, and then later labeled in centimetres only.

cooking

The introduction of metric recipes and measures does not mean that old recipes and kitchen equipment must be thrown out and new ones bought. Old recipes may be used indefinitely. If the recommended metric cup of 250 ml replaces the existing 8 fl. oz. cup—as is most probable—most recipes will not be affected, because a metric cup is only about one tablespoon more than the standard cup now in use.

Although the flour you use will come in kilogram sacks, there's no reason why you can't dip a conventional cup measure into it just as easily as a metric measure.

Measurement of temperature has changed from degrees Fahrenheit to degrees Celsius. For the range of temperatures used for cooking, the number of degrees Fahrenheit is about twice the number of degrees Celsius.



on the road

The conversion of United States highway systems has already begun with the placement of metric road signs on interstate highways in several states. It is expected that across the U. S., all highway signs indicating legal speed limits and distances will be changed over the next few years.

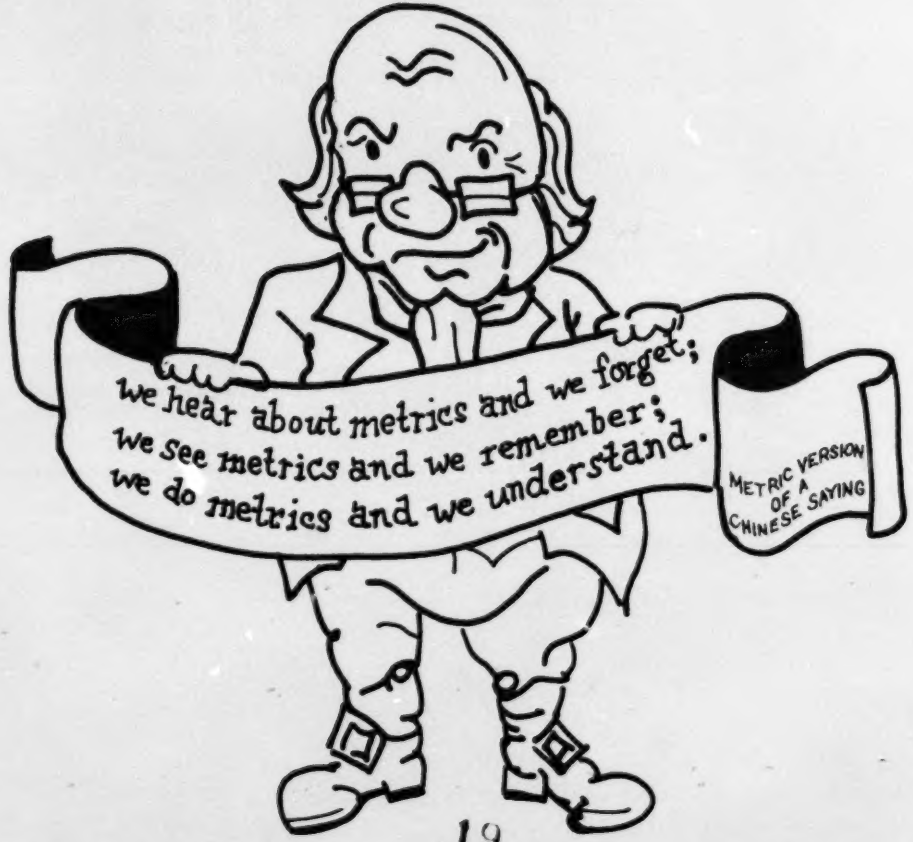
A 55-mile per hour speed limit is equivalent to 88 kilometres per hour. Sometime in the future, gasoline will be sold in litres. Since a litre is a little more than a quart, 4 litres are a little more than a gallon.

conclusion

In the not too distant future, we will all be living in a metric world. The food we eat, the tools we use, and the cars we drive will all be measured in metric units.

The change will come gradually, but it will come. We can adapt to this simpler and more rational system easily if we begin to use the new units as much as possible—to THINK METRIC.

The sooner we begin to THINK METRIC, the sooner we will feel at home with the metric system.


we hear about metrics and we forget;
we see metrics and we remember;
we do metrics and we understand.
METRIC VERSION OF A CHINESE SAYING

METRIC UNITS FOR EVERYDAY USE

Quantity	Unit	Symbol	Example
Temperature	degree Celsius	°C	37 °C is normal body temperature
Length	millimetre	mm	about the thickness of a paper match
	centimetre	cm	about the width of your small fingernail
	metre	m	about the height of a doorknob
	kilometre	km	a little more than half a mile
Capacity	millilitre	ml	5 ml are about 1 teaspoon
	litre	l	a little more than a quart
Mass (weight)	gram	g	The mass of a nickel is about 5 g
	kilogram	kg	A desk telephone has the mass of about 2 kg
	metric ton	t	The approximate mass of a compact car
Speed on land	kilometres per hour	km/h	88 km/h is about 55 mph
Pressure in tires	kilopascal	kPa	200 kPa is the suggested automobile tire pressure

For further information, please send a self-addressed, stamped envelope along with your inquiry to:

North Carolina Department of Public Instruction
Metric Information Office
Box 1064, Raleigh, North Carolina 27602

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